CANADIAN JOURNAL OF ANIMAL SCIENCE
AUTHOR INDEX, VOLUME 61, 1981

AHERNE, F. X. *See* Kennelly, J.J., 349
AHERNE, F. X. *See* Nakano, T., 335, 343
AHERNE, F. X. *See* Sauer, W. C., 793
AHERNE, F. X. *See* Thacker, P. A., 969
*AHLEN, K. *See* Gavora, J. S., 1099
ANDERSON, D. M. *See* Bell, J. M., 453
ANRIQUE, R. *See* Fortin, A., 871
*ANSAH, G. H. *See* Yousif, Y. F., 1084
ARSCOTT, G. H. *See* Throckmorton, J. C., 735
*ARTHUR, P. F. and BERG, R. T. Productivity of dairy-beef crossbred cows under range conditions, 1079
AYALA, H. J. *See* Fortin, A., 871

*BAGG, J. *See* Grieve, D. G., 1098
BAILEY, C. B. Silica metabolism and silica urolithiasis in ruminants: A review, 219
BAILEY, C. B. and LAWSON, J. E. Estimated water and forage intakes in nursing range calves, 415
BATE, L. A. and HACKER, R. R. Effect of parturition on sow urinary creatinine, 1084
*BATE, L. A. and HACKER, R. R. Effect of parturition on sow creatinine, 1084
BATRA, T. R., FISHER, P. S. and McALLISTER, A. J. Effect of glycerol equilibration time on survival of bull sperm frozen in pellets, 63
BATRA, T. R. and LEE, A. J. Extending records in progress to 305-day lactation production by using 1965 USDA and modified extension factors, 523
*BATRA, T. R. Incidence of subclinical mastitis in pureline and crossline cows, 1095
*BATRA, T. R., ROY, G. L., McALLISTER, A. J., DARISSE, J. P. F., LEE, A. J., LIN, C. Y., VESELY, J. A. and WINTER, K. A. Comparison among bull groups for reproductive traits of their mates, 1103
*BATRA, T. R. *See* Hackett, A. J., 1105
*BATRA, T. R. *See* McAllister, A. J., 1104
*BATRA, T. R. *See* Lin, C. Y., 1096
BEACOM, S. E. *See* Thorlacius, S. O., 663
*BEAUCHEMIN, K. *See* Lachance, B., 1110
BECK, B. E. *See* Mathison, G. W., 375
BELL, J. M. *See* McCuaig, L. W., 463
BELL, J. M. *See* Sarwar, G., 719
BELL, J. M. *See* Shires, A., 989
BELL, J. M., ANDERSON, D. M. and SHIRES, A. Evaluation of candle rapeseed meal as a protein supplement for swine, 453
BELL, J. M., SHIRES, A., BLAKE, J. A., CAMPBELL, S. and McGREGOR, D. I. Effect of alkali treatment and amino acid supplementation on the nitrition value of yellow and oriental mustard meal for swine, 783
BERG, R. T. *See* Jones, S. D. M., 23, 237, 369
BERG, R. T. *See* Price, M. A., 105
*BERG, R. T. *See* Arthur, P. F., 1079
BERG, R. . *See* Goonewardene, L. A., 1041
*BERG, R. T. *See* Makarechian, M., 1101
*BERG, R. T. *See* Rosen, M., 1083
*BERG, R. T. *See* Sharma, A. K., 1101
*BETTERIDGE, K. J. *See* Downey, B. R., 1104
BLAIR, ROBERT and SHIRES, ALAN. Comparson of salinomycin and carbadox as growth promoters for weanling pigs, 961

*Indicates abstract only published.

BLAIR, R. *See* Shires, A. 989
BLAKE, J. A. *See* Bell, J. M., 783
BLAKE, J. A. *See* Shires, A., 989
*BLOCK, E. *See* Farmer, B., 1079
*BOOMGAARDT, J. *See* Welton, R. F., 1109
*BOUCHARD, R. *See* Lachance, B., 1110
BOWLAND, J. P. *See* Tacker, P. A., 439, 775, 969
*BOWLAND, J. P. *See* Thacker, P. A., 1094
BOWMAN, G. H. *See* Narendran, R., 213
*BOWMAN, G. H. Trends in Canadian pork carcass indexes, 1087
BRASSARD, L. *See* Taylor, A. W., 601
BROCKMAN, R. P. *See* Laarveld, R., 131, 141, 625
*BUCHANAN-SMITH, J. *See* Mir, Z., 1086
*BUCHANAN-SMITH, J. Corn silage preserved with cold-flow ammonia and its digestion by steers, 1108
BUCHANAN-SMITH, J. G. and YAO, Y. T. Effect of additives containing lactic acid bacteria and/or hydrolytic enzymes with an antioxidant upon the preservation of corn or alfalfa silage, 669
*BUCKLAND, R. B. *See* Yousif, Y. F., 1084
BUCKLEY, W. T. and TAIT, R. M. Chronic copper toxicity in lambs: A survey of blood constituent responses, 613
BURGESS, P. L., NICHOLSON, J. W. G. and GRANT, E. A. Effect of level of alfalfa pellets on intake of early and late harvested timothy silages of different dry matter content by dairy cows, 633
*BURNSIDE, E. B. *See* Cady, R. A., 1102
*BURNSIDE, E. B. *See* Mallard, B., 1089
*BURNSIDE, E. B. *See* McClelland, L. A., 1090
BURNSIDE, E. B. *See* Moore, R. K., 493
BURNSIDE, E. B. *See* Yungblut, D. H., 151
*BURTON, J. H. Effects of fermented or acid preserved feed on acid-base balance in calfes, 1087
*BURTON, J. H. *See* Grieve, D. G., 1098
*BURTON, J. H. *See* Mallard, B., 1089
BUSH, R. S., NICHOLSON, J. W. G., McINTYRE, T. M. and CALDER, F. W. The effect of sodium bicarbonate, cement kiln dust and ammonium perchlorate on the growth of lambs, 423
*BUTLER, G. *See* Friend, D. W., 1093

*CADY, R. A. and BURNSIDE, E. B. Calving ease statistics in Ontario and methods of sire evaluation, 1102
CALDER, F. W. *See* Bush, R. S., 423
CAMPBELL, S. *See* Bell, J. M., 783
CAMPBELL, L. D. *See* Olaboro, G., 751
CARLSSON, R. *See* Cheeke, P. R., 199
*CASTELL, A. G. and STRAIN, J. H. Effect of breed, diet, sex or weaning weight on market pig performance. 1091
CHAMBERS, J. R., GAVORA, J.S. and FORTIN, A. Genetic changes in meat-type chickens in the last twenty years, 555
*CHAMBERS, J. R., GRUNDER, A. A. and FORTIN, A. The influence of carcass fatess on broiler feed efficiency, 1107
*CHAN, C. W. C. *See* Thompson, J., 1083
*CHASE, L. E. *See* McBurney, M. I., 1109
CHAVEZ, E. R. Dietary selenium and cadmium interrelationships in weanling pigs, 713
*CHAVEZ, E. R. *See* Morrison, L. L. 1080, 1082
*CHAVEZ, E. R. *See* Petten, J. C., 1091
*CHAVEZ, E. R. *See* Phillips, L. E., 1094, 1110
*CHAVEZ, E. R. Energy value of Canola meal in growing-finishing pigs, 1091
*CHAVEZ, E. R. Effect of organic and inorganic sulphate supplement in mink diets, 1094

CHEEKE, P. R, CARLSSON, R. and KOHLER, G. O. Nutritive value of leaf protein concentrates prepared from *Amaranthus* species, 199
CHEEKE, P. R. *See* Throckmorton, J. C., 735
CHENG, K. J. *See* Fay, J. P., 311
CHRISTENSEN, D. A. *See* Horton, G. M. J., 503
CHRISTENSEN, D. A. *See* Laarveld, B., 131, 141, 625
CHRISTISON, G. I. and LAARVELD, B. Thyroid hormone response to thyrotropin releasing hormone by pigs fed canola, rapeseed or soybean meals, 1023
CHRISTOPHERSON, R. J. *See* Graham, A. D., 81
*CHRISTOPHERSON, R. J. *See* Kennedy, P. M., 1106
CICHON, R. M. *See* Sauer, W. C., 793
CLANDININ, D. R. *See* Paik, I. K., 181
CLIPLEF, R. L. and STRAIN, J. H. Relationship of sex odor to panel acceptability and certain other organoleptic characteristics of pork chops, 45
*CLIPLEF, R. L. *See* Grinwith, D. L., 1106
COMEAU, J. E. *See* Flipot, P., 175
COSTERTON, J. W. *See* Fay, J.P., 311
COTE, M. *See* Seoane, J. R., 403
COXWORTH, E. *See* Knipfel, J. E., 657
*CROW, G. H. and HOWELL, W. E. Effect of winter feeding on cow and calf weight changes profiles, 1099
*CROW, G. H. and HOWELL, W. E. Use of linear measurements in ROP bull testing programs, 1100
*CROW, G. H. *See* Howell, W. E., 1107

*DARISSE, J. P. F. *See* Batra, T. R., 1103
*DARISSE, J. P. F. *See* Lin, C. Y., 1096
*DARISSE, J. P. F. *See* McAllister, A. J., 1104
DEGEN, A. A. and YOUNG, B. A. Response of lactating ewes to snow as a source of water, 73
*DES MARCHAIS, S., MOORE, R. K., HAYES, J. F. and MOXLEY, J. E. Genetic and environmental effects on conception rates in QDHAS herds, 1081
DIONNE, J. L. *See* Pelletier, G., 945
DIXON, R. M., MATHISON, G. W. and MILLIGAN, L. P. Effect of rumen degradability of supplements on intake of barley straw by steers, 1055
*DIXON, R. M. and MILLIGAN, L. P. Turnover of small particles in the rumen, 1108
*DOUGLAS, M. J. *See* Fisher, L. F., 1097
DOUWES, H. *See* Majak, W., 639
*DOWNEY, B. R. *See* Pierce, R. J., 1086
*DOWNEY, B. R., BETTERIDGE, K. J. and LAGUE, P. C. Bovine culdoscopy, 1104
DUBETZ, S. *See* Gardiner, E. E., 449, 511
DUFOUR, J. J. *See* Lalande, G., 121
DUFOUR, J. J., FAHMY, M. H. and ROY, G. L. The influence of pelvic opening and calf size on calving difficulties of beef × dairy crossbred cows, 279

ELLIOT, J. I. *See* Friend, D. W., 1071
*ELLIOT, J. I. *See* Friend, D. W., 1092, 1093
ELLIOT, J. I. *See* Sarkar, N. K., 507
*ELLIOT, J. I. and FORTIN, A. Relationship between backfat thickness and total body fat in 90-kg boars, 1106
EMMONS, D. B. *See* Jenkins, K. J., 393
ERIKSSON, J. A. *See* Shaeffer, L. R., 35
EVANS, E. An evaluation of the relationships between dietary parameters and rumen liquid turnover rate, 91
EVANS, E. An evaluation of the relationships between dietary parameters and rumen solid turnover rate, 97

FAHMY, M. H. and FRIEND, D. W. Factors influencing, and repeatability of the duration of farrowing in Yorkshire sows, 17
FAHMY, M. H. *See* Dufour, J. J., 279
FAHMY, M. H. *See* Rony, Dominique, D., 853
*FAIRFULL, R. W. *See* McMillan, I., 1100
*FARMER, B., BLOCK, E. and LAARVELD, B. Effects of B-carotene status on reproductive efficency of dairy herds, 1079
FAY, J. P., CHENG, K. J. and COSTERTON, J. W. Alkaline phosphatase activity associated with the walls of different organs of the gastrointenstinal tract in newborn, young, and yearling bovines: Effects of diet and fasting, 311
FEDEC, P. *See* Shires, A., 989
FENTON, MIRJANA *See* Fenton, T. W., 827
FENTON, MIRJANA *See* Mathison, G. W., 649
FENTON, T. W., FENTON, MIRJANA and MATHISON, G. W. Determination of water in fermented feeds by gas chromatography, 827
FISER, P. S. *See* Batra, T. R., 63
FISER, P. S. and LANGFORD, G. A. The effect of sodium pentobarbital and storage time on preservation of ram spermatozoa motility at 5°C, 847
*FISER, P. S. and LANFORD, G. A. Effect of sodium pentobarbital on motility and fertility of ram sperm, 1107
FISHER, L. J. The consumption of acid whey by lactating cows, 209
*FISHER, L. J., DOUGLAS, M. J and GILES, K. Condensed acid whey as a source of dietary energy for calves, 1097
*FISHER, L. J., HALL, J. W. and JONES, S. E. Growth rate of heifers as related to milk yield and composition, 1097
FISHER, MARY-LOU, LEESON, S., MORRISON, W. D. and SUMMERS, J. D. Feather growth and feather composition of broiler chickens, 769
FISHER, MARY-LOU, LEESON, S., SCHAEFER, K., SUMMERS, J. D. Performance of broiler chickens subjected to weekly changes in diet composition based on predicted amino acid requirements, 983
FLIPOT, P. *See* Lalande, G., 121
FLIPOT, P., PELLETIER, G., ST-PIERRE, J. C. et COMEAU, J. E. Evaluation de l'ensilage d'herbe entreposé dans des silos-meules et traité avec un melange formaldéhyde-acide sulfurique (Sylade), 175
FORREST, R. J. A comparison of the growth, feed efficiency and carcass characteristics between purebred Holstein-Friesian steers and Limousin × Holstein (F_1) steers and heifers, 515
FORREST, R. J. Effect of high concentrate feeding on the carcass quality and fat coloration of grass-reared steers, 575
FORTIN, A. *See* Chambers, J. R., 555
FORTIN, A. *See* Martin, A. H., 299
FORTIN, A., REID, J. T., SIMPFENDORFER, S., AYALA, H. J., ANRIQUE, R., KERTZ, A. F., MAIGA, A. M., SIM, D. W. and WELLINGTON, G. H. Chemical composition and carcass specific gravity in cattle: Effect of level of energy intake and influence of breed and sex, 871
FORTIN, A., MARTIN, A. H., SIM, D. W., FREDEEN, H. T. and WEISS, G. M. Evaluation of different ruler and ultrasonic backfat measurements as indices of commercial and lean yield of hog carcasses for commercial grading purposes, 893
*FORTIN, A. *See* Chambers, J. R., 1107
*FORTIN, A. *See* Elliot, J. I., 1106
*FORTIN, A. *See* Friend, D. W., 1093
FRANKLIN, K. K., WINCH, J. E. and MACLEOD, G. K. The effect of concentrate on the digestion of bromegrass constituents, 935
FREDEEN, H. T., WEISS, G. M., RAHNEFELD, G. W., LAWSON, J. E. and NEWMAN, J. A. Growth patterns of first-cross cows under two environments, 243
FREDEEN, H. T. and WEISS, G. M. Comparison of techniques for evaluating lean content of hog carcasses, 319

FREDEEN, H. T. *See* Fortin, A., 893
FREDEEN, H. T. *See* Martin, A. H., 289, 299
FREDEEN, H. T. *See* Tong, A. K. W., 483
FREDEEN, H. T., WEISS, G. M., LAWSON, J. E., NEWMAN, J. A. and RAHNEFELD, G. W. Lifetime reproductive efficiency of first-cross beef cows under contrasting environments, 539
FREDEEN, H. T., MARTIN, A. H. and L'HIRONDELLE, P. J. Tissue composition of Canada A beef carcasses and implications in estimating dietary intake of fat and lean, 883
*FRIARS, G. W. *See* McKay, L. R., 1090
*FRIARS, G. W. *See* Patterson, D. L., 1089
FRIEND, D. W. *See* Fahmy, M. H., 17
FRIEND, D. W. and WOLYNETZ, M. S. Self-selection of salt by gilts during pregnancy and lactation, 429
FRIEND, D. W. and ELLIOT, J. T. Drop farrowing as an aid to sow management, 1071
*FRIEND, D. W., ELLIOT, J. I., TRENHOLM, H. L., THOMPSON, B. K. and HARTIN, K. E. Effect of vomitoxin on gain and feed intake of growing pigs, 1092
*FRIEND, D. W., ELLIOT, J. I., FORTIN, A., LAMOND, E., WOLYNETZ, M. S. and BUTLER, G. Controlled feeding for the once-bred gilt, 1093

*GANESH, D. and MOWAT, D. N. Systems for harvesting, separating and utilizing alfalfa, 1085
GARDINER, E. E. and DUBETZ, S. Hatchability of eggs and performance of SCWL and broiler breeder hens fed soybean meal and fababean meal diets, 449
GARDINER, E. E., DUBETZ, S. and MAJOR, D. J. Sorghum, wheat and corn in the diets of broiler chicks, 511
GAVORA, J. S. *See* Chambers, J. R., 555
*GAVORA, J. S., AHLEN, K., LILJEDAHL, L. E. and WEYDE, C. Age effects of heritability of egg production and quality, 1099
*GAVORA, J. S. *See* McMillan, I., 1100
GENEST, J. *See* Pelletier, G., 945
GERVAIS, P. *See* Seoane, J. R., 403
*GILES, K. *See* Fisher, L. J., 1097
GONYOU, H.W. and STRICKLIN, W. R. Orientation of feedlot bulls with respect to the sun during periods of high solar radiation in winter, 809
*GONYOU, H. W. *See* Tennessen, T., 1088
GOONEWARDENE, L. A., BERG, R. T. and HARDIN, R. T. A growth study of beef cattle, 1041
GRAHAM, A. D., CHRISTOPHERSON, R. J. and THOMPSON, J. R. Endocrine and metabolic changes in sheep associated with acclimation to constant or intermitten cold exposure, 81
GRAHAM, A. D. and PHILLIPS, G. D. Plasma glucose, lactate and free fatty acid response to adrenaline in chronically warm- and cold-exposed sheep, 919
GRAHAM, W. C. and PRICE, M. A. A technique for measuring linear bone growth during short time intervals in cattle, 1049
GRANDHI, R. R. and STRAIN, J. H. Choline supplementation of barley-wheat-soya diets and the reproductive performance of swine, 803
*GRANDHI, R. R. and STRAIN, J. H. Effect of feeding interval on reproductive performance of swine, 1092
GRANT, E. A. *See* Burgess, P. L., 633
GREENBERG, L. G. and MAHONE, J. P. The effect of a 15-h photoperiod on reproductive function in boars at 2, 3, 4 or 5 months of age, 925
GREGOIRE, R. *See* Narasimhalu, P., 1075
GRIEVE, D. G. *See* Yungblut, D. H., 151
*GRIEVE, D. G. *See* Macleod, G. K., 1089
*GRIEVE, D. G. *See* Mir, Z., 1086
*GRIEVE, D. G., HIGA, M., BAGG, J. and BURTON, J. H. Voluntary intake of shredded newsprint by dairy cows, 1098
*GRINWICH, D. L. and CLIPLEF, R. L. Control of androstenone (boar taint) by active immunization or testosterone, 1106

*GROSUM, W. L. *See* Mir, Z., 1086
*GRUNDER, A. A. *See* Chambers, J. R., 1107
GUENTER, W. *See* Mudduli, D. S., 757

HACKER, R. R. *See* Bate, L. A., 913
*HACKER, R. R. *See* Bate, L. A., 1084
HACKER, R. R. *See* Leeson, S., 1063
HACKER, R. R. *See* Shinde, Y., 363
*HACKER, R. R. *See* Wheelhouse, R. K., 1081
HACKETT, A. J., ROBERTSON, H. A., PENNER, P. and McLAUCHLIN, G. R. Comparison of two methods of synchronizing estrus and subsequent lambing in a commercial sheep flock, 67
HACKETT, A. J. *See* Marcus, G. J., 833
HACKETT, A. J. and WOLYNETZ, M. S. Comparison of natural mating and artificial insemination on reproductive performance of three strains of sheep housed in total confinement, 907
*HACKETT, A. J. and BATRA, T. R. Estrus detection aids for dairy cows housed in total confinement, 1105
*HALL, J. W. *See* Fisher, L. J., 1097
HALL, J. W. *See* Majak, W., 681
*HANG, K. F. Ng Kwai *See* Hayes, J. F., 1102
*HANG, K. F. Ng Kwai *See* Lawlor, E., 1082
*HANG, K. F. Ng Kwai *See* Moxley, J. E., 1095
*HANG, K. F. Ng Kwai, HAYES, J. F. and MOXLEY, J. E. Variation in milk protein content and composition, 1096
HARDIN, R. T. *See* Goonewardene, L. A., 1041
HARDIN, R. T. *See* Jones, S. D. M., 369
HARDIN, R. T. *See* Mathison, G. W., 375
*HARDIN, R. T. *See* Sharma, A. K., 1101
HARROP, G. ANNE *See* Horton, G. M. J., 695
*HARTIN, K. E. *See* Friend, D. W., 1092
HAWLEY, A. W. L., PEDEN, D. G. and STRICKLIN, W. R. Bison and Hereford steer digestion of sedge hay, 165
HAWRYSH, Z. J. and PRICE, M. A. The effect of grain feeding on the eating quality of beef from culled cows, 581
*HAYES, J. F. *See* Des Marchais, S., 1081
*HAYES, J. F. *See* Hang, K. F. Ng Kwai, 1096
*HAYES, J. F. *See* Jalbert, J., 1095
*HAYES, J. F. *See* Lapostolle, A., 1080, 1103
*HAYES, J. F. *See* Lawlor, E., 1082
*HAYES, J. F. *See* Monardes, H., 1082
*HAYES, J. F. *See* Moxley, J. E., 1095
*HAYES, J. F. *See* Rastogi, L., 1080
*HAYES, J. F. *See* St. Arnaud, H., 1083
*HAYES, J. F., HANG, K. F. NG KWAI and MOXLEY, J. E. Genetic aspects of casein in milk, 1102
*HIGA, M. *See* Grieve, D. G., 1098
HIGGINS, S. *See* Moore, R. K., 493
HILL, A. T. and HUNT, J. R. Effects of cage floor shape on layer performance, 817
HOLTMANN, WILFRIED, B. *See* Rony, D.D., 853
HOOPER, G. S., WHEELER, E. ELIZABETH, STONE, J. B. and WITTY, R. The effect of proteolytic enzyme and vitamin-mineral supplementation of soy protein milk replacer on calf performance and nutrient digestibility, 687
HORTON, G. M. J. and CHRISTENSEN, D. A. Nutritional value of black locust tree leaf meal (*Rbinia pseudoacacia*) and alfalfa meal, 503

HORTON, G. M. J., MANNS, J. G., NICHOLSON, H. H. and HARROP, G. A. Behavioral activity, serum progesterone and feedlot performance of heifers fed melengestrol acetate and monensin, 695
HORTON, G. M. J. Composition and digestibility of cell wall components in cereal straws after treatment with anhydrous ammonia, 1059
*HOWELL, W. E. and LOUGH, W. The use of doppler sound for pregnancy diagnosis in the ewe, 1099
*HOWELL, W. E., SUMMER, A. and CROW, G. H. Sensory evaluation of light, heavy and yearling lamb, 1107
*HOWELL, W. E. *See* Crow, G. H., 1099, 1100
HULAN, H. W. and PROUDFOOT, F. G. Replacement of soybean meal on chicken broiler diets by rapeseed meal and fish meal complementary sources of dietary protein, 999
HULAN, H. W. and PROUDFOOT, F. G. Performance of laying hens fed diets containing soybean gums, rapeseed gums or rapeseed meals with and without gums, 1031
HULAN, H. W. and PROUDFOOT, F. G. Avoparcin as a growth promotant for turkey broilers, 1067
HULAN, H. W., PROUDFOOT, F. G. and ZARKADAS, C. G. Nutritive value and quality of oat groats for broiler chickens, 1013
HUNT, J. R. *See* Hill, A. T., 817
*HURNIK, J. F. *See* Lewandrowski, N. M., 1085
*HURNIK, J. F. *See* Lewis, N. J., 1085

*IHSSEN, P. *See* McKay, L. R., 1090
IVAN, M. and VEIRA, D. M. Effect of dietary protein on the solubilities of manganese, copper, zinc and iron in the rumen and abomasum of sheep, 955
IVAN, M. *See* Veira, D. M., 113
*IVAN, M. *See* Veira, D. M., 1086

JACKSON, S., SUMMERS, J. D. and LEESON, S. Reproductive performance of broiler and leghorn breeders fed corn-soybean diets with graded supplements of vitamin B_{12}, 765
*JALBERT, J., MOORE, R. R. and HAYES, J. F. Response to feed recommendations in Q-DHAS herds, 1095
JENKINS, K. J., EMMONS, D. B. and LESSARD, J. R. Some in vitro observations on factors affecting rennet (chymosin) clotting of calf milk replacers, 393
JENKINS, K. J. Pepsin and pancreatin supplementation of calf milk replacer containing soy protein, 469
JEREMIAH, L. E. and MARTIN, A. H. Intramuscular collagen content and solubility: Their relationship to tenderness and alteration by postmortem aging, 53
JOLLIFF, G. D. *See* Throckmorton, J. C., 735
JONES, J. D. *See* Sarwar, G., 719
JONES, S. D. M. Offal growth in young and mature dairy cows, 607
*JONES, S. E. *See* Fisher, L.J., 1097
JONES, S. D. M. and MACLEOD, G. K. The feedlot performance and carcass composition of young and mature cull Holstein cows, 593
*JONES, S. D. M. and MacLEOD, G. K. Feedlot performance and carcass composition of lean cull Holstein cows, 1097
*JONES, S. D. M. and WALTON, J. S. Urea space and fat thickness as predictors of beef carcass composition, 1088
JONES, S. D. M., PRICE, M. A. and BERG, R. T. Accumulation of lipid in rib cuts from bull and heifer carcasses of two breeds, 23
JONES, S. D. M., PRICE, M. A. and BERG, R. T. The influence of breed on the efficiency of growth and muscle deposition in bulls and heifers, 237
JONES, S. D. M., PRICE, M. A., BERG, R. T. and HARDIN, R. T. The influence of dietary roughage level on efficiency of growth and muscle deposition in bulls and steers, 369
*JUI, P. Y. *See* Veira, D. M., 1086

KENNEDY, B. W. *See* Moore, R. K., 493
KENNEDY, B. W. *See* Sola, G., 477
*KENNEDY, P. M., CHRISTOPHERSON, R. J. and MILLIGAN, L. P. Effect of cold on digestion of three diets by sheep, 1106
KENNELLY, J. J., AHERNE, F. X. and SAUER, W. C. Volatile fatty acid prodution in the hindgut of swine, 349
KENNELLY, J. J. *See* Sauer, W. C., 793
KERNAN, J. A. *See* Knipfel, J. E., 657
KERTZ, A. F. *See* Fortin, A., 871
KLEIN, D. R. Alternate species for northern animal production, 7
KNIPFEL, J. E., KERNAN, J. A. and COXWORTH, E. Digestibility and voluntary intake by wethers of diets containing ammoniated or high-pressure steam-treated Neepawa wheat straw from fields fertilized with manure or chemical fertilizer, 657
KOHLER, G. O. *See* Cheeke, P. R., 199
*KRISHNAMURTI, C. R. *See* Schaefer, A. L., 1081

LAARVELD, B., BROCKMAN, R. P. and CHRISTENSEN, D. A. The effects of Tower and Midas rapeseed meals on milk production and concentration of goitrogens and iodide in milk, 131
LAARVELD, B., BROCKMAN, R. P. and CHRISTENSEN, D. A. The goitrogenic potential of Tower and Midas rapeseed meal in dairy cows determined by thryrotropin-releasing horme tests, 141
LAARVELD, B., BROCKMAN, R. P. and CHRISTENSEN, D. A. The effect of the level of iodine in canola meal concentrate on milk iodine and thiocyanate content and thyroid function in dairy cows, 625
LAARVELD, B. *See* Christison, G. I., 1023
*LAARVELD, B. *See* Farmer, B., 1079
*LAARVELD, B. *See* Lawlor, E., 1082
*LACHANCE, B., BOUCHARD, R., ROY, G. and BEAUCHEMIN, K. Quality of both hay and milk replacer on the performance of dairy heifer calves, 1110
LAFOREST, J. P. *See* Seoane, J. R., 403
*LAGUE, P. C. *See* Downey, B. R., 1104
LALANDE, G., DUFOUR, J. J. et FLIPOT, P. Performance bouchère et économique des taures de boucherie primipares destinées à l'abattage, 121
*LAMOND, E. *See* Friend, D. W., 1093
LANGFORD, G. A. *See* Fiser, P. S., 847
*LANFORD, G. A. *See* Fisher, P. S., 1107
*LAPOSTOLLE, A., HAYES, J. F. and MOXLEY, J. F. First and last test day lactation correction factors for fat, 1080
*LAPOSTOLLE, A., HAYES, J. F. and MOXLEY, J. F. Calving ease and calf survival as a trait of the sires daughters, 1103
*LAWLOR, E., LAARVELD, B., HANG, K. F. NG KWAI and HAYES, J. F. Trace minerals and dairy cattle reproductive performance, 1082
LAWSON, J. E. Feedlot and carcas traits of progeny of dams of Highland and Hereford breeds and their reciprocal crosses, 27
LAWSON, J. E. *See* Baily, C. B., 415
LAWSON, J. E. *See* Fredeen, H. T., 243, 539
LAWSON, J. E. Milk production and weight of cows of the hereford and highland breeds and their recipricol crosses, 861
LEE, A. J. *See* Batra, T. R., 523
*LEE, A. J. *See* Batra, T. R., 1103
*LEE, A. J. *See* Lin, C. Y., 1096
*LEE, A. J. *See* McAllister, A. J., 1104
LEESON, S. *See* Fisher, Mary-Lou, 769, 983
LEESON, S. *See* Jackson, S., 765
LEESON, S. *See* Narendran, R., 213
LEESON, S. *See* Shen, Huile, 843

LEESON, S. and SUMMERS, J. D. Performance and carcass grade characteristics of turkeys fed the growth promoter, avoparcin, 977
LEESON, S. and SUMMERS, J. D. Effect of rearing diet on performance of early maturing pullets, 743
LEESON, S., HACKER, R. H. and WEY, D. Efficacy of salinomycin as a growth promoter for growing-finishing swine, 1063
LESSARD, J. R. *See* Jenkins, K. J., 393
*LEWANDROWSKI, N. M. and HURNIK, J. F. Periparturient behavior of beef cattle, 1085
*LEWIS, N. J. and HURNIK, J. F. The milk consumption and behavior of neonatal piglets, 1085
L'HIRONDELLE, P. J. *See* Fredeen, H. T., 883
L'HIRONDELLE, P. J. *See* Martin, A. H., 289
*LILJEDAHL, L. E. *See* Gavora, J. S., 1099
*LIN, C. Y., BATRA, T. R., MACALLISTER, A. J., DARISSE, J. P. F., LEE, A. J., ROY, G. L., VESLEY, J. A. and WINTER, K. A. Relation of weight changes within and between lactation to milk yield, 1096
*LIN, C. Y. *See* Batra, T. R., 1103
*LIN, C. Y. *See* McAllister, A. J., 1104
LODGE, G. A. *See* Sarkar, N. K., 507
*LOUGH, W. *See* Howell, W. E., 1099
*LUCKHAM, D. G. *See* Morris, J. R., 1093

*MACALLISTER, A. J. *See* Lin, C. Y., 1096
MACHARDY, F. V. The environment and northern animal agriculture, 1
MACLEOD, G. I. *See* Yungblut, D. H., 151, 159
MACLEOD, G. K. *See* Franklin, K. K., 935
MACLEOD, G. K. *See* Mowat, D. N., 703
*MACLEOD, G. K. and GRIEVE, D. G. Composition, keeping quality and digestibility of wet corn fiber, 1089
*MACLEOD, G. K. *See* Jones, S. D.M., 1097
*MACLEOD, G. K. *See* Mir, Z., 1086
*MACLEOD, G. K. *See* Mowat, D. N., 1108
MAHONE, J. P. *See* Greenberg, L. G., 925
MAIGA, A. M. *See* Fortin, A., 871
MAJAK, W., UDENBERG, T., McDIARMID, R. E. and DOUWES, H. Toxicity and metabolic effects of intravenously administered 3-nitropropanol in cattle, 639
MAJAK, W., McDIARMID, R. E. and HALL, J. W. The cyanide potential of saskatoon serviceberry (*Amelanchier alnifolia*) and chokecherry (*Prunus virginiana*), 681
MAJOR, D. J. *See* Gardiner, E. E., 511
*MAKARENCHIAN, M. and BERG, R. T. Factors influencing dystocia in three breeding groups of beef cattle, 1101
*MALLARD, B., BURNSIDE, E. B., BURTON, J. H. and WILKIE, B. Immunoglobulin variation in Canadian Holstein-Friesians, 1089
MANNS, J. G. *See* Horton, G. M. J., 695
MARCUS, G. J., HACKETT, A. J. and ROBERTSON, H. A. Ram-induced synchronization of estrus in confined ewes under controlled lighting, 833
MARQUARDT, R. R. *See* Muduuli, D. S., 757
MARQUARDT, R. R. *See* Olaboro, G., 751
MARTIN, A. H., FREDEEN, H. T., L'HIRONDELLE, P. J., MURRAY, A. C. and WEISS, G. M. Pork quality attributes: Their estimation and their relationships with carcass composition in commercial pigs, 289
MARTIN, A. H., FREDEEN, H. T., WEISS, G. M., FORTIN, A. and SIM, D. Yield of trimmed pork product in relation to weight and backfat thickness of the carcass, 299
MARTIN, A. H. *See* Fortin, A., 893
MARTIN, A. H. *See* Fredeen, H. T., 883

MARTIN, A. H. *See* Jeremiah, L. E., 53
MARTIN, A. H. *See* Tong, A. K. W., 483
MATHISON, G. W., FENTON, MIRJANA and MILLIGAN, L. P. Utilization of 2,3-butanediol by sheep, 649
MATHISON, G. W., HARDIN, R. T. and BECK, B. E. Supplemental protein, magnesium and selenium plus vitamin E for beef cows fed straw diets in winter, 375
MATHISON, G. W. *See* Dixon, R. M., 1055
MATHISON, G. W. *See* Fenton, T. W., 827
*MATHISON, G. W. *See* Yang, M. T., 1087
McALLISTER, A. J. *See* Batra, T. R., 63
*McALLISTER, A. J. *See* Batra, T. R., 1103
*McALLISTER, A. J., LIN, C. Y., BATRA, T. R., DARISSE, J. P. F., LEE, A. J., ROY, G. L., VESLEY, J. A. and WINTER, K. A. Disease and survival in national dairy feeding project foundation cows, 1104
*McBURNEY, M. T., VAN SOEST, P. J. and CHASE, L. E. Cation exchange and buffering capacity of different fiber sources, 1109
McCAUGHEY, P. *See* Mowat, D. N., 703
*McCAUGHEY, P. *See* Mowat, D. N., 1108
*McCLELLAND, L. A., BURNSIDE, E. B., SCHAEFFER, L. R. and WILLIAMS, C. B. A national sire evaluation scheme for total milking time, 1090
McCRAW, K. *See* Narasimhalu, P., 1075
McCUAIG, L. W. and BELL, J. M. Effects of rapeseed gums on the feeding value of diets for growing-finishing pigs, 463
McDIARMID, R. E. *See* Majak, W., 639, 681
McGREGOR, D. I. *See* Bell, J. M., 783
McGREGOR, D. I. *See* Shires, A., 989
McINTYRE, T. M. *See* Bush, R. S., 423
*McKAY, D. G. Evaluation of a protected fat supplement on broiler production, 1093
*McKAY, L. R., FRIARS, G. W. and IHSSEN, P. Genotype × temperature interaction for growth traits in rainbow trout, 1090
McLAUGHLIN, G. R. *See* Hackett, A. J., 67
*McMILLAN, I., GAVORA, J. S. and FAIRFULL, R. W. Mathetmatical models in poultry egg productions, 1100
*McQUEEN, R. E., READE, A. E. and NICHOLSON, J. W. G. In vivo digestibility of wood fermented by white rot fungus, 1088
*McQUEEN, R. E. *See* Nicholson, J. W. G., 110
MILLIGAN, L. P. *See* Dixon, R. M., 1055
MILLIGAN, L. P. *See* Mathison, G. W., 649
MILLIGAN, L. P. *See* Thacker, P. A., 969
*MILLIGAN, L. P. *See* Dixon, R. M., 1108
*MILLIGAN, L. P. *See* Kennedy, P. M., 1106
*MILLIGAN, L. P. *See* Yang, M. T., 1087
*MIR, Z., MACLEOD, G. K., BUCHANAN-SMITH, J., GRIEVE, D. C. and GROVUM, W. L. Treatments to protect soybean and canola proteins from rumen degradation, 1086
*MISENER, C. C. *See* Nicholson, J. W. G., 1110
*MONARDES, H., HAYES, J. F. and MOXLEY, J. E. Genetic and environmental effects on cell counts on a lactation basis, 1082
MOORE, R. K., HIGGINS, S., KENNEDY, B. W. and BURNSIDE, E. B. Relationships of teat conformation and udder height to milk flow rate and milk production in Holsteins, 493
*MOORE, R. K. *See* Des Marchais, S., 1081
*MOORE, R. K. *See* Jalbert, J., 1095
*MOORE, R. K. *See* Rastogi, L., 1080
*MORRIS, J. R. and LUCKHAM, D. G. Protein and tallow levels in corn-soybean meal diets for market swine, 1093

*MORRISON, L. L. and CHAVEZ, E. R. Selenium-arsenic interrelationship in the nutrition of the weanling pig, 1080
*MORRISON, L. L. and CHAVEZ, E. R. Selenium-iron interrelationship in the nutrition of the weanling pig, 1082
MORRISON, W. D. *See* Fisher, Mary-Lou, 769
MOWAT, D. N., McCAUGHEY, P. and MACLEOD, G. K. Ammonia or urea treatment of whole high moisture shelled corn, 703
*MOWAT, D. N., McCAUGHEY, P. and MACLEOD, G. K. Ammonia or urea treatment of whole high moisture shelled corn, 1108
*MOWAT, D. N. *See* Ganesh, D., 1085
*MOXLEY, J. E. *See* Des Marchais, S., 1081
MOXLEY, J. E. *See* Sola, G., 477
*MOXLEY, J. E. *See* Hang, K. F. Ng Kwai, 1096
*MOXLEY, J. E. *See* Hayes, J. F., 1102
*MOXLEY, J. E. *See* Lapostolle, A., 1080, 1103
*MOXLEY, J. E. *See* Monardes, H., 1082
*MOXLEY, J. E. *See* Rastogi, L., 1080
*MOXLEY, J. E. *See* St. Arnaud, H., 1083
*MOXLEY, J. E., HAYES, J. F. and HANG, N. F. Ng Kwai. Milk pricing systems and dairy cattle selection and management, 1095
MUDUULI, D. S., MARQUARDT, R. R. and GUENTER, W. Effect of dietary vicine on the productive performance of laying chickens, 757
MURRAY, A. C. *See* Martin, A. H., 289

NAKANO, T., AHERNE, F. X. and THOMPSON, J. R. Effect of housing system on the recovery of boars from leg weakness, 335
NAKANO, T., AHERNE, F. X. and THOMPSON, J. R. Mineralization of normal and osteochondrotic bone in swine, 343
NARASIMHALU, P., McCRAE, K. and GREGOIRE, R. Comparative studies on chemicals for reducing microbial populations in poultry wastes, 1075
NARENDRAN, R., BOWMAN, G. H., LEESON, S. and PFEIFFER, W. Effect of different levels of Tower rapeseed meal in corn soybean meal based diets on growing-finishing pig performance, 213
NEWMAN, J. A. *See* Fredeen, H. T., 343, 539
NEWMAN, J. A. *See* Tong, A. K. W., 483
NICHOLSON, H. H. *See* Horton, G. M. J., 695
NICHOLSON, J. W. G. *See* Burgess, P. L., 633
NICHOLSON, J. W. G. *See* Bush, R. S., 423
*NICHOLSON, J. W. G. *See* McQueen, R. E., 1088
*NICHOLSON, J. W. G., McQUEEN, R. E. and MISENER, C. C. Nutritional value of two ratios of potatoes to hay in silage for steers, 1110
NTUNDE, B. *See* Shinde, Y., 363

OLABORO, G., CAMPBELL, L. D. and MARQUARDT, R. R. Influences of fababean fractions on egg weight among laying hens fed test diets for a short time period, 751

PAIK, I. K., ROBBLEE, A. R. and CLANDININ, D. R. The effect of heat treatment and enzyme hydrolysis of rapeseed meal on the performance of broiler cickens, 181
*PATTERSON, D. L. and FRIARS, G. W. Prediction of carcass fat levels in broiler chickens, 1089
PATTON, N. M. *See* Throckmorton, J. C., 735
PEDEN, D. G. *See* Hawley, A. W. L., 165
PELLETIER, G. *See* Flipot, P., 175
PELLETIER, G., ROY, G. L., DIONNE, J. L. and GENEST, J. Comparisons of different forage feeding systems for dairy cows, 945
PENNER, P. *See* Hackett, A. J., 67

PETERS, H. F. *See* Veseley, J. A., 271
*PETTEN, J. C. and CHAVEZ, E. R. Nutritive value of brewers' by-products for neonatal piglets, 1091
PFEIFFER, W. *See* Narendran, R., 213
*PHILLIP, L. E. and CHAVEZ, E. R. Use of distiller's by-product in rations for broilers, 1094
*PHILLIP, L. E. and CHAVEZ, E. R. Effect of nitrogen from brewer's yeast on cellulose digestion in vitro, 1110
PHILLIPS, G. D. *See* Graham, A. D., 919
*PIERCE, R. J. and DOWNEY, B. R. Prostaglandins in fresh and frozen bull semen, 1086
*PONZILIUS, K. H., SHEIKHELDIN, M. A. and SANFORD, L. M. Reproductive hormone secretion in rams treated with triiodothyronine, 1104
*PONZILIUS, K. H. *See* Sheikheldin, M. A., 1105
PRICE, M. A. and BERG, R. T. On the consequences and economics of feeding grain ad libitum to culled beef cows, 105
PRICE, M. A. and TENNESSEN, T. Preslaughter management and dark-cutting in the carcasses of young bulls, 205
PRICE, M. A. *See* Graham, W. C., 1049
PRICE, M. A.Hawrysh, Z. J., 581
PRICE, M. A. *See* Jones, S. D. M., 23, 237, 369
PROUDFOOT, F. G. Photoperiod effects on the volume, motility and viability of spermatozoa drawn from chicken males, 839
PROUDFOOT, F. G. *See* Hulan, H. W., 999, 1013, 1031, 1067

RAHNEFELD, G. W. *See* Fredeen, H. T., 243, 539
*RASTOGI, L., MOORE, R. K., HAYES, J. F. and MOXLEY, J. E. Nutritional status in early lactation and reproductive performance, 1080
*READE, A. E. *See* McQueen, R. E., 1088
REID, J. T. *See* Fortin, A., 871
ROBBLEE, A. R. *See* Paik, I. K., 181
ROBERTSON, H. A. *See* Hackett, A. J., 67
ROBERTSON, H. A. *See* Marcus, G. J., 833
RONY, DOMINIQUE, D., FAHMY, MOHAMED, H. and HOLTMANN, WILFRIED B. Growth, production and reproduction characteristics of the Canadian breed of cattle and its first cross and backcross with the brown swiss. I. Body weights and dimensions, 853
*ROSEN, M. and BERG, R. T. A new approach in beef cattle growth pattern analysis, 1083
*ROY, G. L. *See* Batra, T. R., 1103
ROY, G. L. *See* Dufour, J. J., 279
*ROY, G. L. *See* Lachance, B., 1110
*ROY, G. L. *See* Lin, C. Y., 1096
*ROY, G. L. *See* McAllister, A. J., 1104
ROY, G. L. *See* Pelletier, G., 945

SALMON, R. E. and SZABO, T. I. Dried bee meal as a feedstuff for growing turkeys, 965
SALOMONS, M. O. *See* Thacker, P. A., 969
*SANFORD., L. M. *See* Ponzilius, K. H., 1104
*SANFORD, L. M. *See* Sheikheldin, M. A., 1105
SARKAR, N. K., LODGE, H. A. and ELLIOT, J. I. Effect of a skim milk supplement on growth and body composition of suckled pigs, 507
SARWAR, G., BELL, J. M., SHARBY, T. F. and JONES, J. D. Nutritional evaluation of meals and meal fractions derived from rape and mustard seed, 719
SAUER, W. C. *See* Kennelly, J. J., 349
SAUER, W. C., KENNELLY, J. J., AHERNE, F. X. and CICHON, R. M. Availabilities of amino acids in barley and wheat for growing pigs, 793

*SCHAEFER, A. L. and KRISHNAMURTI, C. R. Tyrosive turnover in the ovine fetus in utero, 1081
SCHAEFER, K. *See* Fisher, Mary-Lou, 983
SCHAEFFER, L. R., ERIKSSON, J. A. and WILTON, J. W. Weighted averages of sire progeny tests for growth traits in record of performance beef herds, 35
SCHAEFFER, L. R. Pedigree indexing of Holstein bulls used in artificial insemination, 261
SCHAEFFER, L. R. and WILTON, J. W. Estimation of variances and covariances for use in a multiple trait beef sire evaluation model, 531
SCHAEFFER, L. R. and WILTON, J. W. Comparison of single and multiple trait beef sire evaluations, 565
*SCHAEFFER, L. R. *See* McClelland, L. A., 1090
*SCHAEFFER, L. R. Genetic differences among herds for milk yields, 1102
SEOANE, J. R., COTE, M., GERVAIS, P. and LA FOREST, J. P. Prediction of the nutritive value of alfalfa (Saranac), bromegrass (Saratoga) and timothy (Champ, Climax, Bounty) fed as hay to growing sheep, 403
SHARBY, T. F. *See* Sarwar, G., 719
*SHARMA, A. K., WILMS, L., BERG, R. T. and HARDIN, R. T. Genetic response to selection in two populations of beef cattle, 1101
*SHEIKHELDIN, M. A. *See* Ponzilius, K. H., 1104
*SHEIKHELDIN, M. A., PONZILIUS, K. H. and SANFORD, L. M. Semen quality and libido of rams treated with triiodothyronine, 1105
*SHELFORD, J. A. and TAIT, R. M. Utilization of dried distillers' rye grains plus solubles by dairy cows, 1098
SHEN, HUILE, LEESON, S. and SUMMERS, J. D. Chemical characterization and feeding value of Apoll radish seed screenings for chicks, 843
SHINDE, Y., HACKER, R. R., NTUNDE, B. and SMITH, V. G. Steroid radioimmunoassays: The problems of blanks, 363
SHIRES, A. *See* Bell, J. M., 453, 783
SHIRES, A. *See* Blair, R., 1961
SHIRES, A., BELL, J. M., BLAIR, R., BLAKE, J. A., FEDEC, P. and McGREGOR, D. I. Nutritional value of unextracted and extracted dehulled canola rapeseed for broiler chickens, 989
SIM, D. W. *See* Fortin, A., 871, 893
SIM, D. *See* Martin, A. H., 299
SIMPFENDORFER, S. *See* Fortin, A., 871
SMITH, T. K. Effect of dietary calcium, phosphorus and vitamin D on zearalenone toxicosis in rats, 191
SMITH, T. K. Influence of dietary ornithine and methionine on growth, carcass composition, and polyamine metabolism in the chick, 1005
SMITH, V. G. *See* Shinde, Y., 363
SOLA, G., KENNEDY, B. W. and MOXLEY, J. E. Correction factors for age and month of calving for protein yields of Holstein and Ayrshire cows, 477
*SONG, H. *See* Wilton, J. W., 1101
*ST. ARNAUD, H., HAYES, J. F. and MOXLEY, J. E. Calving ease and calf survival as a service sire trait, 1083
STONE, J. B. *See* Hooper, G. S., 687
STONE, J. B. *See* Yungblut, D. H., 151, 159
ST-PIERRE, J. C. *See* Flipot, P., 175
STRAIN, J. H. *See* Cliplef, R. L., 45
*STRAIN, J. H. *See* Castell, A. G., 1091
STRAIN, J. H. *See* Grandhi, R. R., 803
*STRAIN, J. H. *See* Grandhi, P. R., 1092
STRICKLIN, W. R. *See* Gonyou, H. W., 809
STRICKLIN, W. R. *See* Hawley, A. W. L., 165
*SUMMER, A. *See* Howell, W. E., 1107
SUMMERS, J. D. *See* Fisher, Mary-Lou, 769, 983

SUMMERS, J. D. *See* Huile, Shen, 843
SUMMERS, J. D. *See* Jackson, S., 765
SUMMERS, J. D. *See* Leeson, S., 743
SZABO, T. I. *See* Salmon, R. E., 965

TAIT, R. M. *See* Buckley, W. T., 613
*TAIT, R. M. *See* Shelford, J. A., 1098
TAYLOR, A. W. and BRASSARD, L. Skeletal muscle fiber distribution and area in trained and stalled Standardbred horses, 601
TENNESSEN, T. *See* Price, M. A., 205
*TENNESSEN, T. and GONYOU, H. W. Methods to determine dominance in cattle, 1088
THACKER, P. A. and BOWLAND, J. P. Effects of dietary propionic acid on serum lipids and lipoproteins of pigs fed diets supplemented with soybean meal or canola meal, 439
THACKER, P. A. and BOWLAND, J.P. Effects of vitamin B_{12} on performance and carcass traits of pigs fed diets supplemented with proprionic acid or calcium proprionate, 775
*THACKER, P. A. and BOWLAND, J. P. Effect of vitamin B-12 on cholesterol metabolism of pigs fed proprionic acid, 1094
THACKER, P. A., SALOMONS, M. O., AHERNE, F. X., MILLIGAN, L. P. and BOWLAND, J. P. Influence of propionic acid on the cholesterol metabolism of pigs fed hypercholesterolemic diets, 969
*THOMPSON, B. K. *See* Friend, D. W., 1092
*THOMPSON, J., CHAN, C. W. C. and TOUCHBURN, S. P. Dietary ME levels and reproductive performance of caged turkey hens, 1083
THOMPSON, J. R. *See* Graham, A. D., 81
THOMPSON, J. R. *See* Nakano, T., 335, 343
THORLACIUS, S. O. and BEACOM, S. E. Feeding value for lambs of fababean, field pea, corn and oat silages, 663
THROCKMORTON, J. C., CHEEKE, P. R., PATTON, N. M., ARSCOTT, G. H. and JOLLIFF, G. D. Evaluation of meadowfoam (*Limnathes alba*) meal as a feedstuff for broiler chicks and weanling rabbits, 735
TONG, A. K. W., NEWMAN, J. A., MARTIN, A. H. and FREDEEN, H. T. Live animal ultrasonic measurements of subcutaneous fat thickness as predictors of beef carcass composition, 483
*TOUCHBURN, S. P. *See* Thompson, J., 1083
*TRENHOLM, H. L. *See* Friend, D. W., 1092

UDENBERG, T. *See* Majak, W., 639

*VAN SOEST, P. J. *See* McBurney, M. T., 1109
VEIRA, D. M. and IVAN, M. Digestion of corn and alfalfa silages in the stomach and small intestine of sheep prepared with two re-entrant cannulas, 113
*VIRA, D. M., IVAN, M., and JUI, P. Y. The effect of partial defaunation on rumen metabolism in sheep, 1086
VEIRA, D. M. *See* Ivan, M., 955
VESELY, J. A. and PETERS, H. F. Lamb production from ewes of four breeds and their 2, 3, and 4-breed crosses, 271
*VESELY, J. A. *See* Batra, T. R., 1103
*VESELY, J. A. *See* Lin, C. Y., 1096
*VESELY, J. A. *See* McAllister, A. J., 1104

*WALTON, J. S. *See* Jones, S. D. M., 1088
WEIS, G. M. *See* Fortin, A., 893
WEIS, G. M. *See* Fredeen, H. T., 243, 319, 539
WEIS, G. M. *See* Martin, A. H., 289, 299
WELLINGTON, G. H. *See* Fortin, A., 871

*WELTON, R. F., WILKINSON, K. A. and BOOMGAARDT, J. Effects of adding buffers and avoparcin to all-concentrate beef finishing rations, 1109
WEY, D. *See* Leeson, S., 1063
*WEYDE, C. *See* Gavora, J. S., 1099
WHEELER, E. ELIZABETH. *See* Hooper, G. S., 687
*WHEELHOUSE, R. K. and HACKER, R. R. Effect of different types of light on growth and reproductive performance in gilts, 1081
*WILKIE, B. *See* Mallard, B., 1089
*WILKINSON, K. A. *See* Welton, R. F., 1109
*WILLIAMS, C. B. *See* McClelland, L. A., 1090
*WILMS, L. *See* Sharma, A. K., 1101
WILSON, G. F. *See* Yungblut, D. H., 159
WILTON, J. W. *See* Schaefer, L. R., 35, 531, 565
*WILTON, J. W. and SONG, H. Repeatability of measurements of beef cow efficiency, 1101
WINCH, J. E. *See* Franklin, K. K., 935
*WINTER, K. A. *See* Batra, T. R., 1103
*WINTER, K. A. *See* Lin, C. Y., 1096
*WINTER, K. A. *See* McAllister, A. J., 1104
WITTY, R. *See* Hooper, G. S., 687
WOLYNETZ, M. S. *See* Friend, D. W., 429
*WOLYNETZ, M. S. *See* Friend, D. W., 1093
WOLYNETZ, M. S. *See* Hackett, A. J., 907

*YANG, M. T., MILLIGAN, L. P. and MATHISON, G. W. Arabinose and xylose contents of forage hemicelluloses: Effects of ensiling and digestion, 1087
YAO, Y. T. *See* Buchanan-Smith, J. G., 669
YOUNG, B. A. *See* Degen, A. A., 73
*YOUSIF, Y. F., ANSAH, G. A. and BUCKLAND, R. B. Seven generations of selection for duration of fertility of frozen-thawed chicken semen, 1084
YUNGBLUT, D. H., STONE, J. B., MACLEOD, G. K., GRIEVE, D. G. and BURNSIDE, E. B. The development of feed intake prediction equations for lactating dairy cows, 151
YUNGBLUT, D. H., STONE, J. B., MACLEOD, G. K. and WILSON, G. F. The testing of several feed intake prediction equations using farm data, 159

ZARKADAS, C. G. See Hulan, H. W., 1013